THE MAD COW NEXUS: BIOPOWER AND THE STAKES/STEAKS OF PERSONHOOD IN GLOBAL, INDUSTRIAL FOOD PRODUCTION

by

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transmissible to humans under a variant form (French and Halweil 27). Scientists currently think that mad cow disease may be caused by a type of protein called a prion, a "nucleic-acid-free protein[. . .] [. . .] which replicate[s] in an entirely unprecedented way" (Commoner 44). Although there is much controversy associated with the coining of the term prion and the elements of the prion theory,[32] mad cow disease, whether it is caused by a protein or whether it is actually a kind of virus that cannot be explained by current scientific knowledge about viruses, places major tenets of biology into question.

The Local as Ethic and Identity

With trends toward globalization, global spaces acquire an obvious prestige, especially in the popular imagination. Some scholars and activists, however, critique globalization because of the threat that global spaces pose to the local, potentially encroaching and effacing local cultural identities and products. While many discussions of the local versus the global take place from the perspective of spatial and size referents, the domain of the local in alternative food production systems suggests a way of thinking about the local not through space; rather the idea of the local in grass ranching necessarily incorporates the global as a type of ethics based on management of a local ecology, environmental resources, human relations, and even information. This use of the local highlights various debates between the local and the global among scholars of globalization, most notably Arjun Appadurai. The following story based on the ethnographic work done for this project serves as entry into the issues involved in these debates.

One day during the Fall, I received a small envelope in the mail. It was from the Triple Diamond ranch. Opening the envelope, I found inside a receipt for thirty dollars, marked "deposit 1 share (1/10) of CSA beef." Written across the top was a note from Emily Hanson, saying "thanks again for your 'vote' on the future of local beef!" The word local was underlined. Emily Hanson is part owner, with her husband John, of the Triple Diamond ranch in southern Arizona, a ranch that produces "natural" beef. Cows raised this way are fed only on grass and some hay and given no hormones. The "CSA beef" they sell is guided by the philosophy of "Community Supported Agriculture" (CSA). The University of Massachusetts Extension web site explains that

> CSA reflects an innovative and resourceful strategy to connect local farmers with local consumers; develop a regional food supply and strong local economy; maintain a sense of community; encourage land stewardship; and honor the knowledge and experience of growers and producers working with small to medium farms. ("Information from UMass Extension")

The Hansons' business abides by these CSA principles. They only sell their beef locally to consumers with whom they have personal contact. Further, their ranch is small by Arizona standards.[33] They use the profits from their business to give back to their community by improving the regional environment. The Hansons' business philosophy is that consumers who buy their beef are voting with their wallet. That is, by choosing to spend their money on the Hansons' beef, rather than industry beef in the supermarket, consumers are voting for local agricultural production and environmental clean-up. Therefore, grass ranching

operations can be a site of local, community identity – a manifestation of a regional, not national, body politic.

Because its connects practices of control (by the power of government) to the body, the idea of the body politic, offers a map of the concept of biopower. This map implicitly joins the cultural formation of an identity of the human body to the domination of nature. While the national body politic implies the domination of nature by culture, a local body politic can be conceived of as forming an identity of the human body based on an environmental ethics, a restoration of the space of nature (but not necessarily removing it from a binary opposition). In its rejection of the U.S. national system of grain-feeding as unhealthy, the practice of grass-feeding beef explores a local concept of the body politic, one that overcomes the domination of nature for which this concept has served. By imagining a local body politic, alternative systems of food production such as grass ranching construct a new map of the healthy material conditions of subjectivity, now found in a reclamation of nature.

The re-localization of global culture is explored by many theorists of globalization. One of the most famous is Roland Robertson who coined the term *glocalization* by translating and adapting Japanese economists' word *dochakuka*. In Japanese, this word "refers to the selling, or making of products for particular markets" ("Comments of the 'Global Triad' and 'Glocalization'"). For Robertson, *glocalization* "means the simultaneity --- the co-presence --- of both universalizing and particularizing tendencies" ("Comments of the 'Global Triad' and 'Glocalization'"). His definition of the word presupposes the consequences of globalization as *both* difference and homogenization, not only the latter,

as some argue.[34] Robertson does not agree with theorists who believe that globalization is another form of U.S. imperialism, since, according to him, the elements which we recognize as globalization were set in place well before the founding of the U.S. However, Robertson contends that the U.S. has a particular identity as the place of anti-global resistance by pointing to the anti-global content of recent political debates and to opposition to the teaching of globalization and international education programs in the U.S. education system. Grass ranching exemplifies the connection in Robertson's work between *glocalization* and the anti-globalism movement. In one respect, grass ranchers reject the globalization of meat production by forming local traditions around production practices; in another respect, however, grass ranching traffics in a global ethics of environmental resource management. Clearly, the study of grass ranching brings *glocalization* back to its original Japanese meaning because grass ranchers in Arizona produce for a niche market of consumers. They are still selling beef, the "standard" product, but the selling points of their beef are the localized practices that surround its production.

The receipt I received from the Hansons was for the thirty dollar down-payment I made on one-tenth of a carcass of cow, which was slaughtered in the next few weeks, after Emily and John Hanson had nine more people from the region signed up and had received their down-payments. Then, the beef was processed, packaged (wrapped in plain white paper with their ranch's logo on it, as well as the name of the cut), and aged, as newly slaughtered beef is not as tender or flavorful as that which has been aged for a week or two.[35] A month after I make my down-payment, Emily Hanson at my door with a huge

cooler chest filled with various frozen cuts – from beef strips, to chuck roasts, to rib eye steaks, and more – that barely fit in my small, urban apartment freezer.[36]

The emphasis in Emily Hanson's note on "the local" suggests more than just an emphasis on CSA; it highlights the purpose of my visit to their ranch – a quest to find local beef. My first interviewee, Ed Montoya, emphatically declared to me "there is no such thing as local beef." He explained how beef travels incredible untracked distances, making it impossible for a consumer to know where the beef one buys in the supermarket was born, raised, or processed. He detailed a fairly common trajectory of cattle in the process of producing beef: in Arizona, ranchers might buy live cattle from Mexico, then sell the cattle to owners of feedlots where the cattle are fattened on grain. These feedlots may be located somewhere else in the U.S. Texas or one of the Midwestern States seems to be a popular feedlot destination for Arizona cattle. Then these cattle may be sold to the management of the slaughterhouses in other parts of the country or possibly sold locally, but also shipped elsewhere because of the convenience afforded by what is called "boxed beef."[37] While advertisements for beef use phrases like "100% Texas beef," the cattle from which the steak is made was slaughtered in Texas, but it might originally have been born in Mexico or Pennsylvania, may have spent most of its days in a feedlot somewhere in the Midwest, and may have changed owners about three to five different times. In *Fast Food Nation*, Eric Schlosser adds another complication to meat's divorce from the local, when he points out that parts of over one hundred cows may be used to make one hamburger:

> The days when hamburger meat was ground in the back of a butcher shop, out of scraps from one or two sides of beef, are long done. Like the multiple

> sex partners that helped spread the AIDS epidemic, the huge admixture of animals in most American ground beef plants has played a crucial role in spreading E. Coli 0157:H7. A single fast food hamburger now contains meat from dozens or even hundreds of different cattle. (204)

For the industry, the body of the single cattle is no longer a unit of value with regard to the production of beef. While the denial of the bounded subject inherent in this plurality of bodies may seem postmodern, it has deadly consequences in the area of food production and consumption.

Schlosser is not the only writer to find similarities between AIDS and the negative health consequences of agribusiness food practices. Howard Lyman warns that human fatalities resulting from mad cow disease could far exceed the spread of AIDS at its fastest. But AIDS still follows a rule of disease that society has come to accept – that infected human bodies can infect other human bodies. Society is accustomed to shunning the diseased body, but with the new diseases, where a hamburger can transmit infection to a body, society and science must rethink their assumptions about the spread of disease. When disease moves from agribusiness through food commodities to bodies, the underlying strains of biopower that permit decisions about food production to affect the consumer's bodily health change. With this realization, those with bodies affected by other diseases (like cancer, for instance) can begin to question how this system of biopower constructs them. Now that there is concrete evidence to suggest that through the food supply agribusiness can create the diseased body, cancer patients can look to how industry's decisions regarding the environment and waste disposal affect the health of bodies.

Understanding that disease can be linked to management decisions about resources and commodities encourages a critique of a social order permitting the conditions for disease. This new view shifts the focus away from a disease taboo model that locates the conditions for disease within the morality of the subject and places it on the ethics of industry.

Another tension similar to the anti-global movement through global means is the reformation of mainstream cattlemen and cattlewomen into new grass ranchers. The movement is happening on the fringes of the beef industry itself. Many of the new grass ranchers are actually from ranching families who have been "converted" and now distinguish themselves from the practices of large agribusiness "industry," which they refer to distastefully. They now embrace smaller-sized operations – from smaller herds of cattle, to smaller methods of marketing their product, and even, in one case, to a smaller-sized slaughterhouse on their own property. According to Susan Potts, belonging to the industry's system means that a producer must relinquish small scale operations: "being a commodity producer of beef really stinks and the future isn't getting any better unless you get really, really big." Most of the new grass ranchers I interviewed are the first generation in the history of their family ranches to reject the feedlot system, and they are able to do this because of the changing demands of consumers. New grass ranching, according to Potts and the Hansons, has developed as a strategy for those who do not want to compete with the size of the major meat companies, or for those who disagree with the practices required by such a size of operations. It is a viable option because of new market trends, trends which were supported by consumer fear over mad cow disease. These ranchers can

make a living by targeting a niche market in which there is a demand for meat deemed healthier and more environmentally sound.

With the era of globalization, health comes into fashion. Being "healthy," both physically and with respect to the environment, is now a commodified state. Once a state of privilege designed to accommodate those who could afford to patronize specialty stores, now large discount chain supermarkets carry health foods, still at an elevated cost compared to other items. Even the body of the beef producer is changing: no longer stressed out and in charge of operating huge facilities, the new grass ranchers pride themselves on their health and on being able to physically work the land themselves. Howard Lyman, for instance, left industrial beef production when he realized that his health was failing not only from the physical demands placed on the body of a rancher in the industry, but also from his consumption of beef. He was part of a trend he had witnessed among all of his rancher friends who were dying at early ages.

The statement that "there is no such thing as local beef" is true for the grain-feeding industry where cattle are sent to feedlots and can change owners multiple times. However, a different situation exists for the new grass ranchers in southern Arizona who, for the past five years, have begun rejecting the grain-feeding system. Besides a perception that there is a growing body of consumers who want these things, their stated motivation in switching from grain-feeding to grass-feeding is to better the quality of the environment in their local areas, produce beef that is healthier (not at risk for mad cow disease, low in fat, high in essential nutrients) and tastier, and to help consumers regain their connection to the production of their food.

In this switch from grain-fed to grass-fed beef, the new grass ranchers have had to re-conceive beef production entirely. In the grain-fed beef industry, ranchers are only involved in the initial step, raising the cattle. However, new grass ranchers are in charge of all aspects of beef production. Grass ranchers raise their cattle on their land and feed them off of the grass that grows there naturally. This connection to a geographical locality can present complications that the grain-feeding industry does not have to worry about, especially in southern Arizona. The Hansons, for instance, are frequently concerned about the lack of rain in southern Arizona, a meteorological concern that does not have as large an impact on grain industry ranching. Instead of bringing the food to the cattle or growing the food where the cattle are, the industry transports the cattle to the food. The Hansons, however, are better off than most ranches in southern Arizona because they are located in the San Pedro River watershed, an area commonly referred to as a "desert oasis" because of its higher rainfall averages.

The concerns about the local climate of southern Arizona are not the only space/place considerations important to the grass-feed-only operations. The beef industry breaks the process of beef production down into categories and steps that new grass ranching does not use. For instance, industrial beef production includes a step in which cattle are held as they are weaned. During this process, cattle begin to put on weight before they reach the feedlots. The space of new grass ranches, however, must be reconfigured. New grass ranches house their animals throughout the entire production process. More steps in the production practices allow the grain-feeding industry to further remove beef

production from a locality by divorcing the identity of the producer from the whole process of production. The Hansons comment on these challenges to their type of business:

> Emily: Grass-fed is not easy to produce, we have a little patch of irrigated pasture. Otherwise we depend on weather. If you make it local you have to hold them for two years. You have to figure out where to put calves to get them weaned.
>
> John: The demand is greater than the supply but the administrative stuff is more than we can handle. (Hanson, interview)

Because these ranchers reject industry production categories, creative use of ranch space is demanded by the local nature of the beef production. Emily and John Hanson's business refused the barriers and categories that industry has established as "normal."

Where the mainstream industry breaks the process down into individual categories – cow-calf operation, stocker operation, feedlot, slaughterhouse, and packing and rendering plants – the new grass ranchers create a more fluid system of operation with more autonomous control. In a larger sense, resisting the standard categories of industry reflects a new conception of the body because they refuse to accept the thinking about bodies that has produced the health risks for the meat industry. New grass ranchers value the single, unitary, bounded body of one cow, and of the individual consumer. When you buy a hamburger patty or ground beef from new grass ranchers, the meat comes from one, single animal, not one hundred. Because of practices like retaining ownership of their animals, grass-feed operations achieve a sovereignty (that is, an empowered agency) that doesn't exist for the individual players involved in the mainstream industry. By opposing the

identity constructed through the national meat industry, new grass ranchers' identity comes from alternative networks (non-nation-state based) of those who embrace the principles of CSA.

This alternative identity has had an impact on grass ranchers' business practices, especially in regard to processing. Of all the new grass ranchers interviewed, the Hansons have developed the most radical strategy for slaughtering their cattle. The "administrative stuff" that John Hanson refers to in the above quote is, in part, the regulations imposed on their use of the packinghouse they have on their property, such as expensive salmonella tests, and specific guidelines for cleaning slaughterhouse equipment based on large-scale operations that slaughter over 200 head of cattle a day instead of theirs that slaughters one head of cattle every two or three weeks. Because the USDA rules apply to all operations, no matter the scale, the Hansons have experienced problems with government regulations by attempting to use their own small, private packinghouse. Given these differences, they currently sell beef to consumers through word of mouth, local publicity, Internet advertising, and farmer's markets, thus allowing them to creatively bypass these USDA regulations. The Hansons cannot slaughter beef in their packinghouse for commercial sale. The federal government constructs the meat industry -- just as the meat industry's practices ultimately construct the bodies of meat-eaters -- by discouraging the "local" slaughtering of cattle. To get around the USDA limitations, John and Emily Hanson must sell the animal itself, transferring the ownership to a group of ten people, and then do a "custom butcher" at their slaughterhouse for the new owners.

Emily Hanson says that transferring ownership to a local group helps to practice the principles of CSA:

> One of the things we sell is the connection -- so many people have lost the connection with where their food comes from. What we have is community supported agriculture, when we have ten people sign up we transfer ownership of the animal and butcher it so that then it is not wholesale and he will do a "custom" butcher for those ten people. We tried to form our own buying club, you pay five dollars to become. . . but you can't sell un-inspected meat, so technically we are not selling meat, we are selling the animal. (Hanson, interview)

This marketed connection is not just between people and their food and its production, but between people and the animal they consume as a well as forming connections between neighbors. Instead of the consumer's body being mediated by the government, the body of the consumer is mediated by a community connection to the people who produce their food and the animals from which it is produced. The same people who oversee the birth of the calf are the same ones who oversee its processing and sale. The crux of the crisis of beef production lies in this visibility and accountability. On new grass ranches, all procedures of beef production are visible, thereby knowable, to the producers and to the consumers. The relationship fostered by this exchange of knowledge inherently designates a greater accountability of the producer to the consequences of his or her methods of operation.

Consumers can visit the facilities and the land on which the animals are raised. Consumers also know that by buying grass-fed beef they are buying meat that was raised

within their region and thus "breathe[d] the same air" and drank the same water as the consumers. The emphasis on local place produces a body (of animal, of consumer, of producer) whose identity is rooted in the local environment and economy. The connection that the new grass ranchers sell is not just a parody of an earlier history of food production, a return to imagery of the pre-modern; it is, rather, part of a newly defined corporal mediation of food relationships which is shaped by the activist methodologies that drive both grass ranching businesses and CSA.

In *A Primer for Daily Life*, Susan Willis describes how capitalism sells products based on the myth of this connection that consumers once had with their food: "[a]s if to compensate for the marginalization and in some cases the erasure, of productive labor, the supermarket offers an array of theatrical labors, whose importance has more to do with the spectacle they create than the actual services they render" (17). For instance, employees in supermarket meat sections dress up in white aprons and hats, mimicking the working garb that real butchers used to wear. However, since most of the cuts of meat received in supermarkets are now pre-cut and, more and more, pre-packaged, the costume becomes part of a spectacle, "making the supermarket something of a stage for sales and the costumed employees the actors enacting service" (17). The myth of a butcher's service is evoked by the reference to the traditional look of the butcher, but the clothing is no longer about functionality or work -- in its initial purpose to keep the butcher safe and his regular clothes free from the blood of the meat -- but it is, as Willis puts it, a capitalist strategy whereby "customers consume the spectacle of work" (18). The meat section of the supermarket is indeed a "spectacle" because the costumes are for show and not functional:

no supermarket would permit customers to see bloodstains on a meat-section employee's apron.

Because of their more direct connection with consumers, grass ranchers do not need to construct an aura of hard work around the production of beef in order to sell it. Having adapted to these ranchers' schedules during the interview process, I can attest that they work from sun-up to sun-down. For example, Emily Hanson asked if she could deliver the freezer pack of meat that I had ordered through them later in the evening because she wanted to have all the daylight she could for work at the ranch. The personal connection with customers that is inherent in the sales of their beef (and the rejection of the supermarket as a sales site) ensures that labor is not turned into a spectacle.

Grass ranchers trade not an image, like the industry does, but an education. They are always looking for other ways to educate people about their beef and increase their profits. The Hansons are currently building a small guesthouse that will host tourists on their land to participate in a ranching experience. This activity, known as agri-tourism, has become quite popular as an extra income for ranching operations, grain-fed and grass-fed alike. Non-working ranches, whose entire businesses are built around this concept, have become popular tourist destinations in the West. Agri-tourism in the meat industry is a phenomenon that develops historically as important family ranches in the West fall behind the injunction of global capitalism to grow bigger, turning to the tourist economy to seek other means of income without dismantling the ranching business entirely. New grass ranchers rely on agri-tourism in this instance to better educate consumers and to reconnect them with their food supply.

According to John and Emily Hanson, the cause of the problems inherent to the current system of beef production in the grain-fed beef industry, including the problem of mad cow disease, is the idea of "product transformation." They believe it is out of this element in the process of production that health risks for consumers – both in terms of food safety and the quality of nutrition – are produced and a bad reputation is given to beef. The steps in the production process that they refer to as "product transformation" are those steps which erase any local connection that the cattle once had. Emily Hanson explains the initial steps in the process of beef production in industry:

> There are two basic types [of ranching operations]. A cow-calf operation, where you have the mother cow herd and you raise the calves and sell them when they are weaned. When those are sold they will go to a stocker operation, a place that has more reliable feed. The animals are weaned when they are eight or nine months old and they spend eight months growing, gaining weight and then they sell them to feedlots. (Hanson, interview)

John Hanson, who used to teach land management at a university in the western United States and who advises groups around the world on resource management, finished Emily Hanson's thought, "the first two parts are ranching, the rest is product transformation and it's where the bad reputation comes from." In their way of thinking, feedlots are centers of "product transformation" because cattle are fed hormones and other chemicals to make them grow artificially large so as to bring in more profit per head (profit on cattle is made by weight). Product transformation is conceived of by people in the industry generally as

practices that add to the value, profit, and market-demand for beef. For instance, transforming a product might mean coming up with a new form of it (like pre-cooked ground beef sold in packets, or a new cut of steak), or by finding other uses for it (like selling domestically undesirable parts of cattle to an international market, or using unsellable remains of slaughtered cattle in the feed of live cattle).[45] The notion of product transformation, from the perspective of the grass ranchers, plays on notions of naturalization because a natural product begins to move away from the natural by the invention and construction of a system of other ways to make money from it.

John and Emily Hanson are concerned about beef's reputation because they are targeting a niche market of consumers who eat meat and yet who are interested in eating healthily.[46] Emily Hanson explains:

> We are trying to create a real different niche, grass-fed beef. It has a different flavor, a different chemistry, with omega fatty acids and it is much healthier. We are looking for a way to make ours seen as a good product. Most people used to think that the high quality meat was grain-fed, we want to make people understand how this can be grass-fed. The bad press that meat has gotten is from the feedlots. In the crowded conditions and with the manure, they have to give them antibiotics. (Hanson, interview)

The Hansons react against what has become normalized and naturalized in the meat industry by cattlemen and women as well as by consumers who have come to consider grain-fed beef as higher quality than grass-fed beef. A rejection of the normalized practices of industry links both the local and natural aspects of the consumer body to whom they are

targeting their meat. A similar principle underlies their rejection of feedlots as underlies their embrace of the local nature of operations denied by industry. Because of the risks to cattle and consumer health grass ranchers refuse to accept these principles even though the feedlot system makes it easier for the industry to mass produce cattle and turn a greater profit. Therefore, mad cow disease has called into question the normalization of grain-feeding as the only choice of a system of beef production.

Susan Potts agrees with the Hansons and their attitude toward feedlots. Potts locates the impetus to start her grass-fed beef business to the bad conditions produced by feedlots. She recounts an experience that led her to rethink the industry via a discussion about the lack of diversity in cuts of meat available in grocery stores, effects of the normalization of these practices that impact cooking techniques and diet:

> When you go to a grocery store you never see a liver and you never see a shank bone. You don't see them because they can't sell enough to make a profit. The livers are a problem because the feedlots burn them up. I had a very eye-opening experience. We were doing carcass evaluation and there was a barrel of livers. A guy was sifting through them, deciding which ones go into the [waste] pile, and all of them had little white lesions on them. The grain ration is so hot that it burns up their livers by the time they come out. This was a defining moment for me. (Potts, interview)

For Potts, a food producer who is concerned about the relationship between the effects of an agricultural system on the bodies of animals and the subsequent effects on the bodies of consumers, seeing the burnt livers of grain-fed cattle indicate a problem in the system. For

others, however, who do not think the way she does about the relationship between the bodies of animals and human consumers, this fact would go unnoticed. In the industry, many people may not be aware of the negative effects of the feedlot system on cattle carcasses because there is a lack of communication and interaction between the various players involved – the feedlot owners, for instance, may have never seen the effects of the grain on cattle's livers like Potts did because she follows her animals all the way to the slaughterhouse, an all but defunct practice in the industry called "following" or "tracking."

Richard Gooding, an industry consultant whom I interviewed, named the communication between cow-calf operators, stockers, feedlots owners, and packers as the biggest current challenge to the industry. This lack of communication was also a subject of complaint at the NCBA 2002 convention, where it became obvious that the most serious breakdown in communication in the industrial beef production system is between those who raise and feed the cattle and those who process them. Packers were barely represented, if at all, at the NCBA convention, and the general feeling of the committee sessions I observed was that there needs to be more participation in the association by packers. Packers, however, tend to exclude themselves from the rest of the industry by having many of their own associations and lobbying groups.

Feedlots have recently received much bad press because they are the site of the practice linked to mad cow disease: feeding the remains of slaughtered cattle to live cattle. Jane Takagi Little, the main character in Ruth Ozeki's *My Year of Meats*, discovers the continuation of this and other health-endangering practices in a visit to a ranch during her

investigation into the meat industry. Her interviewee, an operator of a feedlot, says, when asked about the feed he gives the cattle:

> You East Coast environmental types are always going on about recycling. . . well, that's just what we're doing here with our exotic feed program and we're real proud of it. We got recycled cardboard and newspaper. We got by-products from potato chips, breweries, liquor distilleries, sawdust, wood chips. We even got by-products from the slaughterhouse – recycling cattle right back into cattle. Instant protein (258).

This practice was hardly developed by the industry as a response to critiques of environmental activists. According to sources like Lyman's *Mad Cowboy*, Richard Rhodes *Deadly Feasts*, Sheldon Rampton and John Stauber's *Mad Cow U.S.A.*, and my interviewees, it was developed as a way to make the process cheaper. The less money it costs to fatten the cattle, the more profit there is to make. Also, when the industry began mass producing beef at fewer packinghouses, the disposal of the massive amounts of waste produced by the process became a problem.

The depiction of feedlots by the grass ranchers and by Ruth Ozeki is confirmed in many books on the subject like those listed in the above paragraph. In one of these books, Jeremy Rifkin's *Beyond Beef*, the author states that pesticides and industrial sewage, as well as cardboard, newspaper, and cement dust, are among the additives to the feed in order "to [help] reduce costs and fatten animals more quickly" (13). In *Waste of the West*, Lynn Jacob's description of feedlots concurs with those of the grass ranchers, Ozeki, Rifkin, and the other authors mentioned above:

> [A]lmost all public range cattle end up in feedlots, along with most U.S. cattle. Here they spend their last 100-120 days crammed together by the thousands (as many as 100,000), standing in their own excrement, with little or no shelter from the elements. They are fed a 'hot' diet, high in concentrates and grains, scientifically designed to fatten them as quickly as possible, supplemented with such delights as processed sawdust, feathers, newspaper, 'plastic hay,' sewage, tallow and grease, poultry litter, cement dust, cardboard scraps, and even their own excrement, all disguised with artificial flavors and aromas. They receive synthetic hormones to make them grow fast – as much as 3 pounds per day. From their terrible diet, crowding, unnatural living conditions, and mistreatment, animals commonly experience physical ailments and disease, for which they are given feed heavily laced with antibiotics. (350)

Jacob discusses the "hot" diet of cattle at feedlots that Susan Potts, who saw the damage that this diet does to the internal organs of cattle, cites as a determining moment in her switch from grain-feed ranching to grass-feed. Many of the grass ranchers tell consumers that cows have naturally evolved to eat only grass, so that grain-feeding goes against the nature of the their digestive systems, but Potts was the most vocal about this with her customers out of all of the ranchers I interviewed.

The way that the grass ranchers interact with their consumers in explaining the nature of grass-feeding is influenced by popular reactions to mad cow disease. For instance, on the Oprah show devoted to mad cow disease, when told of the practice of forced animal

cannibalism, where cows are fed the remains of dead cows, Oprah commented that cows were herbivores, implying that it wasn't natural to be feeding them grain, and certainly not the meat from other cows (Rampton and Stauber 17).

The element of the "natural" in the discourse of the grass ranchers (also apparent in the reactions of outraged consumers like Oprah) counters a system (grain-feeding) that has become "naturalized" ("created [. . .] out of nowhere, like the diamond market," according to John Hanson) with an alternative discourse of the natural. The word "natural" does not have the same connotations, or government regulations on it, as the word "organic," yet it conjures up many of the same images in the imagination of the consumer.

The consumer to whom the grass ranchers sell is one who values the extra care taken by them so as not to place any "unnatural" ingredients into the beef or so as not to treat the animal in an "unnatural" way by feeding it matter that it was not meant to eat. This new body of the consumer for grass-fed beef is a body that wants, as Susan Potts put it a number of times, to "eat clean." But the animals, because they are raised in a particular locality, are still subject to environmental pollutants like those described in chapter two. "[B]reath[ing] the same air as we do" is both a selling point for the local (as well as a construction of the new body – both cattle and human -- as a local one) and a drawback of the local if the air the consumers breathe is highly polluted. This link explains the grass ranchers commitment to environmental clean-up in their areas. When taken to an extreme, the construction of the new sense of "the natural" body of both cattle and human becomes an obsession with purity and cleanliness. The debate on genetically modified organisms (GMO) traffics necessarily in imagery of purity and impurity, asking if once we start

producing genetically modified crops can the integrity on the non-GMO crops be assured. Purification and fear of contamination are features of the racist rhetoric of the rancher-vigilantes discussed in Chapter Two.

The new grass ranchers I interviewed not only find themselves creating a market identity by opposing the grain-feeding industry but by opposing government decisions and involvement in their businesses as well. Asking for less government involvement goes against some of the contemporary readings of the problem of mad cow disease in which authors find fault with the laissez-faire attitude of government towards the agricultural industry.[47] But many of the new grass ranchers feel the opposite. They feel that the government's attempt, for instance, to get involved with the definition of organic standards is an intrusion on behalf of industrial agribusiness, a thinly veiled facilitation of agribusiness' entry into the natural foods market. Susan Potts says about the relationship of grass ranchers to government organic foods standards that, "we're really the underground because when the USDA set standards we said 'we won't be organic, we won't use that name, we will distinguish ourselves again,' eventually we will become something else, we are always evolving." Potts tells about getting involved with the definition of organic foods for the state of Arizona:

> I called up the State Agricultural Department and asked if Arizona was going to come up with organic standards. The person was really glad I called. She said that they just started a committee to come up with those. She asked me what I did and I said that I raised grass-fed beef. The women was surprised that I wanted to be involved. She said they had contacted the

> Arizona Cattlemen's Association and they said no one is interested in this, that will never happen. She asked me if I wanted to be on the committee and I said yes. I sat on the committee but the USDA started their [campaign] to have nationwide standards and came out with standards that were awful, terrible. Never has a piece of proposed rule making had more comments. Europe went berserk. They said that they would never buy anything ever again if this went through in this form. Two years later [after substantial revision] it finally passed. (Potts, interview)

Potts' description of her short involvement on the committee for Arizona organic food standards reveals the importance of rejecting the government controlled regulations for organic foods and of adopting "natural beef" as a descriptor instead. Here, Potts testifies to the gap she sees between the interests of the national beef industry and the new grass ranchers and the lack of prominent organizations that represent their interests to government. Potts' description also reveals the circuitous and informal ways -- like cold-calling a state agency at the right time and speaking with the right person – through which representation is established and networks are formed for the grass ranchers. The grass ranchers adopt the ranching community's skepticism about the government's concern for their interests. They also adopt the growing distrust of governmental policy regarding the safety of the food supply. Instead of calling for more governmental attention to these matters, however, they view the government as incapable of doing right in these situations and want it less involved with their businesses. Here is where their views diverge significantly.

The new grass ranching community set themselves in opposition to the practices of the grain-feeding industry through a definition of "the natural." Grass ranchers distinguish themselves from the "unnatural" content of grain-feed, the chemical components of which have become naturalized by the industry, but also because of the practice of feeding the remains of slaughtered cattle to live cattle. The Hansons speak of this practice in the following citation as going against biology – thus going against the natural -- and, as Ozeki does too, as forced cannibalism:

> From a consumer standpoint, up until after World War II how meat was processed was something that everyone knew. Then in 1950, they came up with the grain-fed process through university research as a way to turn cheap grain into expensive meat. Pretty sad. Now they are trying to take expensive grain and turn it into cheap beef. [The meat industry] won't disappear. They created a market out of nowhere, like the diamond market, when there was no demand. Mad cow is an attempt by industrial agriculture to cut down expenses and make operation more profitable. Are there waste products that we can turn around and put back in feed to cut costs? Ruminant animals are not effective. They look for ways to make them more efficient for sale from slaughterhouses. With small [slaughterhouses] it's okay, but when you have five hundred tons of bone and stuff from big slaughterhouses. . . they need calcium and phosphorous, why not feed it back to cattle? But they don't just get the calcium and the phosphorous transmitted; they get whatever is in the bones. This is closing a dangerous

> biological loop, playing with a terrible danger, exposing animals to the possibility of transmission every time you do this. . . [. . .]. When you feed the dead to the living there is a cumulative effect, going against biological evolution. Something was bound to happen. It's perfectly predictable and also inexcusable. (Hanson, interview)

The way in which John Hanson speaks of mad cow disease as going against biology further enforces the natural aspect of the grass-fed beef. Mad cow disease, in his account, is caused by the ignorance of natural processes by industry, the founding feature of the grain-feeding system. Just like they created a market out of nowhere, they have now created a disease which might otherwise have been avoided. Hanson's description of the practice that has led to mad cow disease is a particularly apt one because scientific accounts of this disease often refer to it as "going against biology." So far, as discussed at greater length in the previous chapter, scientists have not been able to determine exactly the biological mechanism that triggers the disease, but the guess is that it may be a different type of protein than has been previously recognized.

Not only are there remains of dead cattle and other dead animals along with other wastes in the grain feed given to cattle, but there are hormones and antibiotics as well. The use of antibiotics in feedlots is another complaint of grass ranchers and their consumers. Jeremy Rifkin, in *Beyond Beef*, describes the dangers of these antibiotics:

> In the past, managers used to add massive doses of antibiotics to the cattle feed to promote growth and fight diseases that run rampant through the animals' cramped, contaminated pens and feedlots. In 1988, over 15 million

> pounds of antibiotics were used as feed additives for livestock in the United States. While the cattle industry claims that it has discontinued the widespread use of antibiotics in cattle feed, antibiotics are still being given to dairy cows, which make up nearly 15 percent of all beef consumed in the United States. Antibiotic residue often shows up in the meat people consume, making the human population increasingly vulnerable to more virulent strains of disease-causing bacteria. (12-13)

More people are beginning to question the state of beef production that Rifkin describes above. Public and scientific perception of antibiotic and hormone use on cattle is beginning to change: once naturalized, it is now contested.

The scientific community has begun to pay attention to the problem of antibiotics in foods. According to an article in *The New York Times*, "[a]ntibiotic-resistant bacteria are widespread in commercial meats and poultry and can be found in consumers' intestines" (Brody). The article from October 2001 reports on studies published by *The New England Journal of Medicine*; among the findings of these studies is the following: "scientists [. . .] examined 200 samples of ground meats [. . .] A fifth of the samples were contaminated by salmonella, a leading cause of food poisoning. Antibiotic resistance was rampant among the contaminated samples [. . .] some of the salmonella bacteria [. . .] had become 'superbugs,' resisting 9 to 12 antibiotics" (Brody).

The article briefly mentions that the European Union banned "the use of antibiotics in farm animals" in 1998 (Brody). Antibiotics regulation is not the only policy on which the U.S. and the EU disagree. Hormones used in feedlots in the U.S. are currently the

source of trouble in U.S. trade relations with Europe. European Union standards for beef state that there should be no traceable residue of hormones – this does not mean that cattle cannot be given hormones at all, but this means that there has to be a certain amount of time allotted between the administration of hormones and slaughtering for the any traces of the hormones to be dissipated. At the session of the Joint International Marketing Committee during the 2002 NCBA convention, the U.S. beef industry says that this is part of European protectionism, in order to artificially assure a higher percentage of the market for domestic beef production. The World Trade Organization claimed that the EU ban was illegal and has formed a group to investigate the situation further. In stark contrast, the World Health Organization has recognized the gravity of the health risks posed to consumers by the consumption of chemicals in food, declaring in a recent report their intent to "reduce the overuse and misuse of antimicrobials in food animals for the protection of human health" (PBS "Modern Meat")

In an interview with me, Susan Potts spoke about vaccinations and antibiotics abuse, comparing the dangers to consumers in eating this beef to the dangers regarding the taking of Cipro during the Anthrax scare after the September 11th terrorist attacks on the U.S., saying that people are worried in the same way about building up tolerance to antibiotics and producing resistant strains of bacteria in the Anthrax crisis and in consumer health risks from consuming antibiotics through meat:

> Now people are against vaccinating humans and the same movement shows up in animals. It's because of concern for our immune system. I heard on the news the other day with this anthrax stuff that people are taking Cipro and

> the say that if the test comes back negative I can stop. They are producing resistant strains. This affects the rest of us. (Potts, interview)

The *New York Times* article mentioned above also compared antibiotic-resistant bacteria resulting from antibiotic use in food production with scientist's worry about an abuse of the antibiotic cipro during the anthrax scares after September 11th. Susan Potts does vaccinate her cattle and give them antibiotics when they are sick, but she makes sure to give an appropriate dose and she waits the suggested amount of time for the antibiotics to be out of the cow's system before taking that animal to be processed. An adequate dose of antibiotics and a proper waiting time before slaughter are two things that cannot always be assured by the grain-feeding industry. A new consciousness about how individual practices or industrial practices affects a larger collectivity are helping to create the consumers of beef targeted by the grass-feed operations.

The new grass ranches fight against what has become the "natural" way of doing things in industry. But in fact, the practices of the industry, in their consequences upon bodies, have been shown to not be "natural" at all, in the sense that new grass ranchers and their consumers understand the word. Because of consumer reaction against practices that are unhealthy for life and "unnatural" for the earth's ecosystems, a market for a more natural beef product has formed on the margin of the "natural foods" market. Grass ranchers are able, because of consumer support, to promote "natural beef" a term that implies an ethics with respect to sane feeding, medical, and slaughtering practices. Or, as the slogan for the Hansons' business says, "Good for You. Good for the Land." The

conception of the "natural" body in grass ranching is one that connects the body of the consumer to nature in the sense of non-human life like plants and animals.

Organic versus Natural Foods

Although organic systems of agriculture have been in place for decades worldwide, the 1990's were a significant decade for the growth of organic foods from the standpoints of production, consumption, and regulation (Greene 3). During this period, more producers turned to organic methods of agriculture. The 2001 report from the USDA finds that "organic cropland more than doubled between 1992 and 1997" (Greene 3). In this report, author Catherine R. Greene also finds that "consumer demand for organically grown food has increased 20 percent or more annually since the late 1980s" (5-7). In the report, organic farming is defined as "systems [that] rely on ecologically based practices such as cultural and biological pest management, and virtually exclude the use of synthetic chemicals in crop production and prohibit the use of antibiotics and hormones in livestock production" (Greene 5). Definitions and regulation of organic standards responded to this rapid growth during this period. According to the USDA report, "[b]y the mid-1990s, over half the States had laws or rules regulating the production and marketing of organically grown food and fiber, and Congress had passed legislation requiring that national standards be set" (Greene 5). Some states have gone further in responding to this trend, by offering subsidies for farmers who convert to organic methods, something that Europe has been doing since the '80s (Greene 4).

The USDA report attests to the ways in which globalization aids in the growth of organic farming systems. Greene contends that many of the four reasons mentioned as to

APPENDIX D

ETHNOGRAPHIC DATA: THE INTERVIEWEES

The ethnographic work done as part of this research situates these changing notions of embodiment within the specifics of the flows, networks, and alliances of globalization. The theoretical conclusions drawn from the ethnographic studies help define grassroots globalization in meat production by drawing on actual experiences of a small community of ranchers in southern Arizona who raise "natural" beef. These ranchers distinguish their practices of meat production from the highly technologized, transnational industry, demonstrating different values about embodiment.

In a 1998 *Phoenix New Times* article, Barry Graham, a reporter, describes his visit to one of the ranches involved in the fieldwork for this project:

> To get to the [Triple Diamond Ranch] from Phoenix, you take the highway to Florence and keep going. After 13 miles, you turn onto a dirt road and drive carefully through some of the bleakest country imaginable. The farther you go, the spookier it gets; the sun bounces off the dirt, and there's no sign of life anywhere. At last you come to a gate. There's an old computer lying on the ground, with the name ["Hanson"] inscribed on it.
>
> You open the gate and drive through. Then you stop and get out of your car to close the gate again. A bunch of mean-looking steers give you the eye. You drive a little farther, and see a trailer and a small camper. A couple of dogs look at you and bark, but they're friendly. (Graham)[5]

The reporter's description of his drive to the ranch, particularly the inclusion of the detail of a computer monitor as landmark, suggests a post-technological landscape. The lack of "civilization" and the "bleak[ness]" of the landscape cause him to describe the experience

as "spook[y]." His personification of the steers as "mean" (as opposed to the noted friendliness of the dogs) further evokes a hostile relationship between humans and the natural landscape.

The owners and operators of the ranch, John and Emily Hanson, do not feel that Graham properly represented their views. The article describes the Hansons as an anomaly because it assumes that desert ranching is not a viable activity. Therefore, it lumps the Hansons into the category of "welfare" ranching analogous to any other mainstream ranch surviving off government subsidies. A PBS special in April 2002 on the dangers of our current system of meat production entitled "Modern Meat" (after the book by Orville Sheller) makes a similar mistake by lumping longtime grass-rancher Dale Lasater with interviews of industry cattlemen while failing to distinguishing Lasater's alternative practices of livestock production. In this case, an immediate distinction should have been made in Graham's article because the Hansons actually funded the start of their business through a conservation easement with The Nature Conservancy, an environmental group, and not through government subsidies. In fact, the Hansons disagree with the system of government subsidizing, saying that the system amounts to the government paying people to mismanage their land. One of the problems that led Graham to make such misinformed judgments may have been his inability to distinguish the Hansons' practices from those of the mainstream U.S. meat industry.

This dissertation, then, seeks to establish a framework to understand, in radical terms, the difference between the mainstream meat industry and ranchers like the Hansons through theories of globalization and through the concepts of biopower and

power/knowledge. Dynamic aspects of globalization -- such as glocalization, grassroots movements, and environmental ethics -- point to a significant development in the "natural" philosophy behind new grass ranches: the preliminary restructuring of values relative to experiences of embodiment and the subsequent restructuring of knowledge about embodiment as mediated by food.

From June 2001 to February 2002, I interviewed ranchers and individuals involved in the meat industry within southern Arizona. I spoke informally with butchers, supermarket employees, supermarket customers, and meat connoisseurs. I conducted three formal, open interviews with people who were part of the mainstream meat industry in which cattle are sent to feedlots where they are fed grains,[6] and three formal, open interviews with ranchers who fed their cattle almost exclusively on grass. In the presentation of the ethnographic material, I have assigned pseudonyms to the ranchers interviewed and to their ranches and have tried to be as vague as possible about reference to institutions with which they are connected in order to protect their anonymity.

Key parts of the learning process during the fieldwork for this project were acquired by: 1) attendance at a two-day symposium at Arizona State University in which representatives from the meat industry joined historians to discuss the preservation of Western heritage and ranchlands,[7] and 2) participation in the 2002 National Cattlemen's Association Convention (NCBA) in Denver, Colorado. At the NCBA convention, I established contact with the American National Cattlewomen Foundation and attended "Cattlemen's college," an educational program funded by a large pharmaceutical company. At the program, I attended seminars intended for ranchers to learn legal concerns about

conservation easements, new products in the industry, and the future of production and distribution.

My first interview was with a long-time industry cattle rancher who claims to be the eleventh generation of a ranching family, whose family's original landgrant from Spain for the Rincon mountain area outside of Tucson is housed in an Arizona museum. This rancher, Ed Montoya, had retired from ranching and sold off his land.[8] At the time we talked, he was attempting to get back into ranching. However, he couldn't afford any land in Arizona and was looking into neighboring lands in New Mexico. People in the business have informed me that the state of New Mexico has stricter regulations than Arizona about allowing development of ranching lands and thus has more ranch land available, making the land more affordable. (In other words, by development, I mean building such things as shopping malls, condominiums, and golf courses on it). Montoya's relationship to his parents' generation of ranchers is typical of the story told by many ranchers in the meat industry: he took over the family business after being the first family member to pursue an education in Animal Science. In *Mad Cowboy: Plain Truth From the Rancher Who Won't Eat Meat*, a recent book about mad cow disease and other health hazards resulting from industrial practices, Howard Lyman explains the significance of the education Montoya's generation of ranchers received. Lyman points out that after he received his degree, he returned to take over the family ranching business and re-vamped the entire outfit according to what he had learned in college about modern technological and chemical components of agriculture. The education of Ed Montoya and Howard Lyman's generation of ranchers marks the beginning of a significant era in meat production, particularly with

respect to the current partnership between the meat and pharmaceutical industries, underwritten by the nature of information circulated in universities during the 1950s.[9]

Montoya and I met through friends during a trip to Nogales, Mexico: I began a conversation with a couple and their guest at a neighboring table when I ordered steak tampiqueña for lunch at a cantina in Mexico. It turns out that the couple resided in southern Arizona and were very interested in and knowledgeable about food, having been in the restaurant business. I was invited to visit them for the weekend, where I met Montoya. I first interviewed him at the "cowboy bar," as the locals call it, a neighborhood bar close to my friends' residence. We had an informal follow-up before Christmas at a tamale-making party hosted by my friends.

The next phase of my research took me to a grass ranch to spend the day with a family owned and operated ranch. I had found their email address and open-house information for their ranch on a web site devoted to natural beef.[10] When I visited them in September, their living space on the ranch consisted of an icebox, table, and sink in the open air and two trailers with an outhouse. They were in the process of building a home next to the trailers and a guest facility designed eventually to house tourists coming to spend the weekend. The foundations were already set, and they expected to occupy the house by Christmas. I talked with John and Emily Hanson for more than four hours, and John made us lunch, a jambalaya-type dish with rice, ham, onions, tomatoes, and green pepper and chilies from their garden. One of the rules in ranching is that you do not eat the product; most ranchers can get beef at the grocery store cheaper than what it would cost them to eat their own. Both John and Emily Hanson came from farming families, and they

were hoping to make this business work so they could sell it in a few years and move back to their hometown in Arizona. John used to teach land management at a university in the Southwest, and he had acted as a consultant on land management for contacts across the world. I held an informal follow-up interview when Emily Hanson dropped off, at my home in Tempe, the meat I had bought from her ranch.

I then drove to a town near the border in Arizona to interview Tom (Tomás) Espinosa who transports cattle from the border, who had been around the ranching community on both sides of the border since childhood, when his father ran their trucking business. I met Tom through customs and immigrations officials in Nogales and Tucson who directed me to the stockyard operator in Marana, who subsequently referred me to Tom. Tom's English was slightly imperfect, which created some minor confusions in our discussion -- a fact I didn't realize until later. Tom's father, a native English speaker, was also present for the last half of the interview and added a few words to the discussion. Tom and his father told me about the county fair in Sonoita which I attended on my way to visit the border crossing at Douglas/Agua Prieta.

Susan Potts was another grass rancher whom I interviewed. John and Emily Hanson had given me her name, but she was also listed on the web site through which I had found John and Emily Hanson. On October 21, I drove down to Tucson to meet her at her table at the farmer's market there and stayed with her the whole morning, until noon when the market began closing (a good three hours). Along with my formal interview, I documented Potts' interaction with her customers. Potts and her husband (who was not present) are both from ranching families. Potts made a point to tell me that she was fourth generation and her

husband fifth generation ranchers. They used to own an industrial ranching operation, but Potts was slowly turning their ranch into a grass-feed operation. As well, she is also pursuing her new interest, raising organic chickens. Potts has a special agreement with the meat laboratory at an educational institution in Arizona. Since her meat is labeled "natural" according to governmental standards, the meat lab processes her meat first, before any other meat gets processed that day. This ordering helps avoid any possible mixing of regular, mainstream with her natural meat. The insights I gained from Potts' interview were further supported by an interview with another grass ranching family whose name had been given to me by both the Hansons and Potts and who were also listed on the natural beef web site. Because they were too busy to meet with me and have me visit their ranch, I conducted an interview via email.

In November 2001, I conducted a final interview with Richard Gooding, an associate livestock specialist affiliated with a higher education institution in Arizona. One day when he was scheduled to be in Tempe to meet with some of the executives of the Arizona Cattlemen's Association, we met for coffee in the early morning and talked until after lunch. Richard comes from a ranch family in Colorado. He has had his hand in many occupations, including real estate, banking, livestock feed, breeding associations, commodity brokering, and a processing plant owner. Although he had a M.S. degree in meat science, he returned to earn a doctorate in nutrition while in his early forties. Richard's varied interests in different aspects of the industry and its associations include the history of the legendary ranches of the West.

Some of the ranchers I interviewed were a little hesitant to talk to me, reflecting their suspicions of "university types" or "bleeding-heart liberals" (as Montoya put it). Also, I was not from a food-producing family, and my interest in interviewing these ranchers (to understand the current trends of the meat industry and the current issues of concern to them) glaringly affirmed that fact. If I had been from one of those families, they thought, I should know very well what these trends and issues were. For example, one woman whom I emailed asking if she would talk to me about the activities of the Arizona State Cowbelles Association, responded on October 11th 2001 to my August 25th email and said "I'm sorry I have put you off for so long [. . .] I think we in the food production business get a little gunshy [sic]and paranoid." She asked me to clarify my intentions, and I wrote back to explain my interest in the role women play in the meat industry and in cattle ranching in the southwest. I never heard from her again. The distrust evident in the reticence of meat industry professionals to speak with consumers or "university types" lies at the heart of the problems facing the mainstream meat industry from the distances separating production and consumption. The problems, particularly the possibility for illness, resulting from this distrust and these distances have created an opening for the development of grass ranching businesses.

Approximately four southern Arizona ranches raise cattle by grass grazing and market the beef produced there to consumers. Contrary to most ranchers in the mainstream beef industry, these grass ranchers retain ownership of the animal throughout the entire process and control all the steps of production, from the purchase of the cattle or the calving to the sale of packaged cuts of beef. The Hansons were unable to say exactly what

percentage of beef consumed in Arizona is currently grass-fed, but they thought it was still a fairly small percentage. The rest of the ranchers in Arizona place their cattle in (or sell them to) feedlots.

The birth of new grass ranching in southern Arizona (around 1995-1996) coincides with the intensification of consumer fear about mad cow disease. On April 16th, 1996, Oprah Winfrey invited guests to her show to speak out about the practices of the meat industry and the possibility of mad cow disease in the United States. One of her guests was Howard Lyman. Lyman's statements on her show about the practice of feeding the remains of dead cattle to living cattle, the forced cannibalism at the heart of the mad cow crisis, caused Oprah to say, "But cows are herbivores. They shouldn't be eating other cows" (Rampton and Stauber 17). To this, Lyman responded, plugging grass-fed beef production, "That's exactly right, and what we should be doing is exactly what nature says. We should have them eating grass, not other cows" (Rampton and Stauber 17). Oprah's show was a pivotal moment in the history of mad cow disease because it served as the introduction for a majority of American consumers to the longstanding practices of the meat industry.

As discussed in earlier chapters, grass ranching has also been around for a long time. This practice used to be the standard state of ranching before the increasing use of scientific technology in food production characteristic of the post-World War II period. However, the emergence of contemporary grass ranching businesses is unique to the history of meat production in the sense that the manner of practicing grass ranching has been influenced by the opportunities afforded by global flows, spaces, technologies, and networks. The contemporary situation of grass ranching is distinguished from grass

ranching in earlier history by the term "new grass ranching." Although a reaction against globalization, these grass-feed operations remain a part of globalization, making the practices of contemporary grass ranches much different from earlier ones. To offer a further clarification of terminology, industrial livestock production is referred to as "industry ranching" or just simply as "industry" (as the new grass ranchers like to call it) instead of "grain-feed" ranching, which would distinguish the practice of grain and grass feeding but is also inaccurate because other (chemical) ingredients are used in grain-feed other than grain. The term "mainstream" ranching or meat production is also not used because it endorses the normalization of these practices, an endeavor antithetical to the spirit of this work.